DOCUMENT RESUME

ED 184 140 CS 205 464

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TITLE The Conversational Unit: An Investigation of Communicative Competence in Emerging Language.
PUB DATE Feb 80
NOTE 16p.; Paper presented at the Annual Meeting of the International Interdisciplinary UAP-USC Conference on Piagetian Theory and the Helping Professions (10th, Los Angeles, CA, February 1-2, 1980).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Child Development; *Communicative Competence (Languages); Connected Discourse; Infants; Interaction Process Analysis; *Language Acquisition; *Language Patterns; Language Research; Mothers; *Parent Child Relationship; Parent Role; Preschool Education; *Speech Communication; Young Children

ABSTRACT

The development of the Conversational Unit (CU) was investigated in a semilongitudinal study of three mother/son dyads in nonstructured spontaneous communication. The children were 19 to 23 months old at the start of the investigation. Sound films were recorded monthly during bathing and feeding times. After four months, verbal and nonverbal interactions were transcribed and the conversational units--verbal exchanges on one topic--were identified and timed. Inter- and intrasubject comparison of CU length, conversation initiator, and topic temporality were computed. Patterns of CUs were similar for all subjects. Gestural support of CUs was similar for all dyads over time. Ability to sustain conversation significantly increased for two subjects. Changes in initiating conversation were dependent on maternal role. CUs accounted for 50% of the samples taken during the fourth month. Evidence of emerging communicative competence was seen in conversation participation, communication about past and future, and functional use of language for communicative purposes. (Author/RL)

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The Conversational Unit: An investigation of communicative competence in emerging language

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Presented at the Tenth Annual

UAP-USC Conference on
Piagetian Theory and the
Helping Professions

Los Angeles, Calif. Feb., 1980

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Introduction

Research in the last decade regarding the child's acquisition of language has shifted appropriately from the domination of syntax-in-the-abstract to study of the acquisition of communicative competence. Communicative competence is defined as the ability to express ideas appropriately in social interchange. The seminal work of Bloom (1970) demonstrated that the form and function of emerging language are inextricably tied to the context of the utterance. Her contribution drew attention to the need for further inquiry based on dyadic and environmental interactions. Subsequent study focused on microkinesic analysis of message transmission (Kestenberg) and analysis of the input of mothers' speech to young children (Broen,1972;Snow, 1972; Phillips,1973). Rules for discourse, role-taking skills, and conversational control have been explored by Ervin-Tripp (1973), Berko Gleason (1973), and Mishler (1975). The construct of the Speech Act as proposed by Searle (1969) has been applied to emerging language systems by Dore (1974, 1975). Halliday's research has explored the function of language in early childhood (1975). Recent attention has been given to how children develop concepts of action from context; the ability to understand how people, objects, and processes interact in the environment. In this view, action contexts are presented as necessary precursors to linguistic development (Sugarman, 1973; Bruner, 1975). Despite the valuable information obtained regarding interactional dimensions of communicative exchange, too often, results have been fragmented. Implicit in these studies is the assumption that the specific aspect being investigated is the critical factor in the interactive process as it affects language acquisition.

Significance of the Problem

The development of an effective language user entails not only the acquisition of a linguistic system but must be accompanied by the ability to express ideas appropriately in social and intellectual interchange. Not only must a child acquire linguistic skills, but by necessity, human communication demands the development of strategies to extract meaning from the environment, understand speakers' intentions, develop role-taking skills, and recall and store both linguistic and non-linguistic information. The development of communicative competence is believed dependent on the ability to interpret meaning from the world and to ascribe intentions to the cultural exchange. This exploratory study addressed itself to how the Conversation Unit (CU - a linguistic exchange of information regarding a single topic, uninterrupted by intrusion of another topic) would reflect the growth of communicative competence over time. It was hypothesized that the length of the CU would increase as well as an overall increase in discourse would occur during a four month period. Conversely, a decrease in the need for gestural support would be evident in the same time. The ability of the child to use functional language affectively was anticipated to be seen in the child's ability to participate in CUs regarding past, present, and future events. Further, this study explored maternal strategies which aid conversational exchange.

Methods and Procedure

A longitudinal study of three mother-child subject pairs was undertaken to observe non-structured spontaneous communication. The children; Reno, David, and Peter (all first born male singletons), ranged in age from nineteen to twenty-three months at the initiation of the project. All three families were college educated white middle class residents of suburban communities.

Sound films were taken monthly of each dyad during bathing and feeding events, over a four month period. Each event sample represented nine minutes of consecutively filmed samples, resulting in eighteen minutes of filmed data per dyad at each time period. To assure reliability, subjects were visited on two consecutive days each month and event samples were obtained on successive days. The sound track of the filmed data was transferred to audio tape and written transcripts prepared. Gestures parallel with verbal events were identified on film and written transcriptions indicated both verbalizations and gestures.

CUs were identified by topic on the transcripts. Audio tapes of the data were then timed according to the established CU by a graduate student in speech pathology. Any disagreement regarding the boundaries of a CU were resolved by discussion until agreement was reached. Inter and intra-dyad comparisons of the length of the CU were computed for each time period and across time. Identification of the initiator of each CU was determined and comparative analysis assessed changes of the mean length of the CU (MLCU) for each subject.

The semantic intention of topic temporality was determined for each CU as initiated by each speaker. Comparative study of each subject over time, as well as between dyads was performed. Prior to the time a child is inflecting verbs, parental responses indicate interpretation of semantic intentions, particularly to immediate past events or the child's intentions for future events.

Assessment of the use of gesture in conversation was applied to CU analysis. Gestural support of the CU topic was evaluated in terms of its use as support for the topic by either member of the dyad. If the main

gestural behavior was directly supportive of the CU topic, it was noted, even if there were extraneous gestures that were not topic related. Percentages of gesturally supported CUs were computed for each subject pair over time as well as comparative analysis among the dyads.

Results

Examination of Fig. 1 indicates specific relationships between the frequency of a mother's verbal behavior and the subsequent amount of her child's verbalizations. In general, the data revealed that maternal verbal frequency is inversely related to the child's verbal behavior. Although Peter's mother was the least verbal of the mothers in this study (a total of 694 verbal events), Peter was the most verbal child with 724 verbal occurrences tallied. In contrast, David's mother, the most verbal, had 929 total events and her son, the least verbal of the three children, verbalized 557 times during the study. Reno's mother's total verbalizations were tallied at 823, and Reno had a total frequency of 655 verbal events over time. All the children decreased gestural behavior over time. As seen in Fig. 1, the children's gestural behavior exceeded their mothers at all time periods.

Examination of Fig. 2 indicates the number of CUs for each dyad and the frequency of gestural use to support the meaning of the conversation. Similar distributional patterns in the number of CUs among the dyads were found by two-way chi square analysis. Developing communicative competence is evident in general, in changes in the ability to sustain and initiate conversation across time for all the children studied.

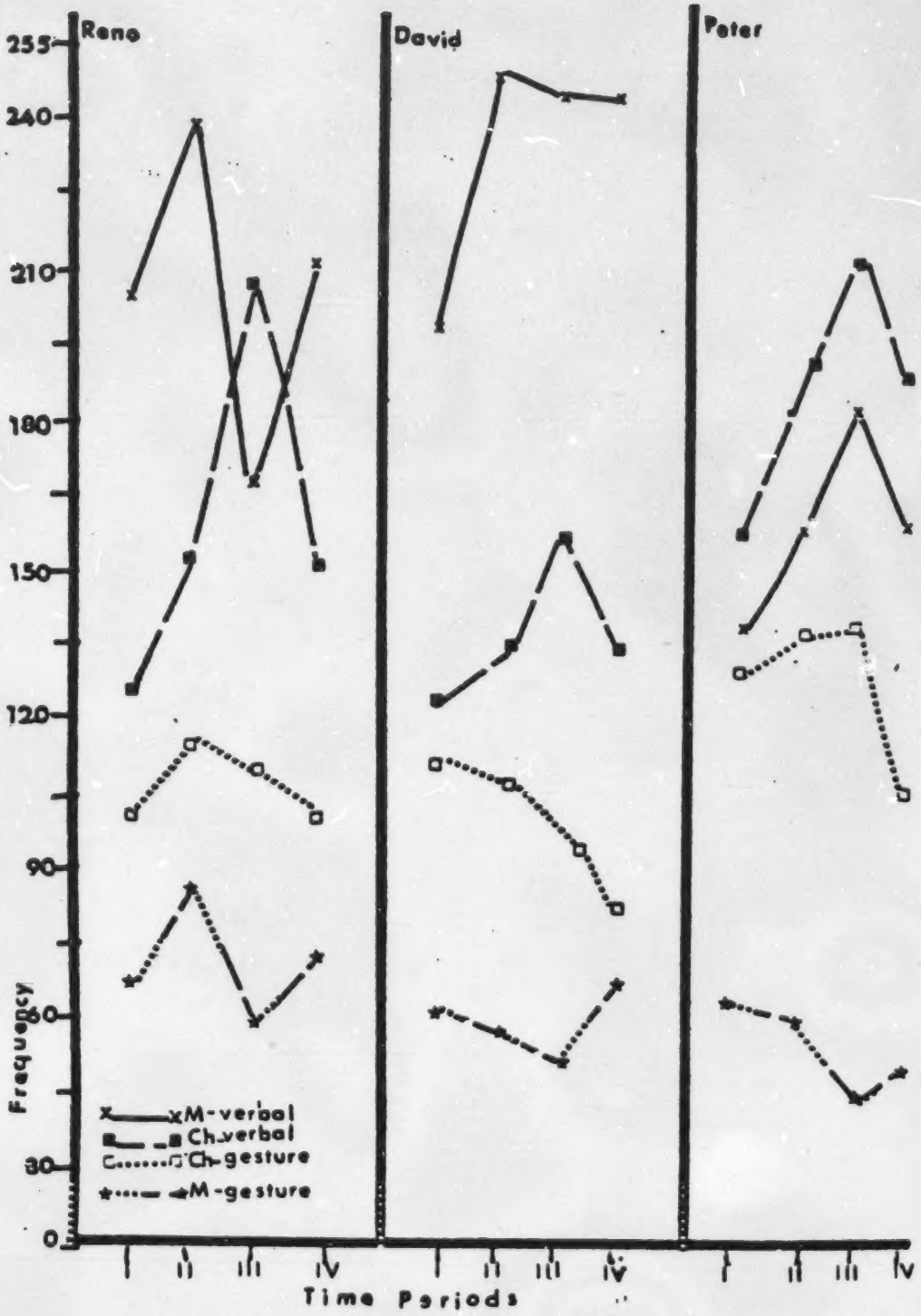

Fig. 1. Relationship between frequency of verbalizations and gesture for each dyad.

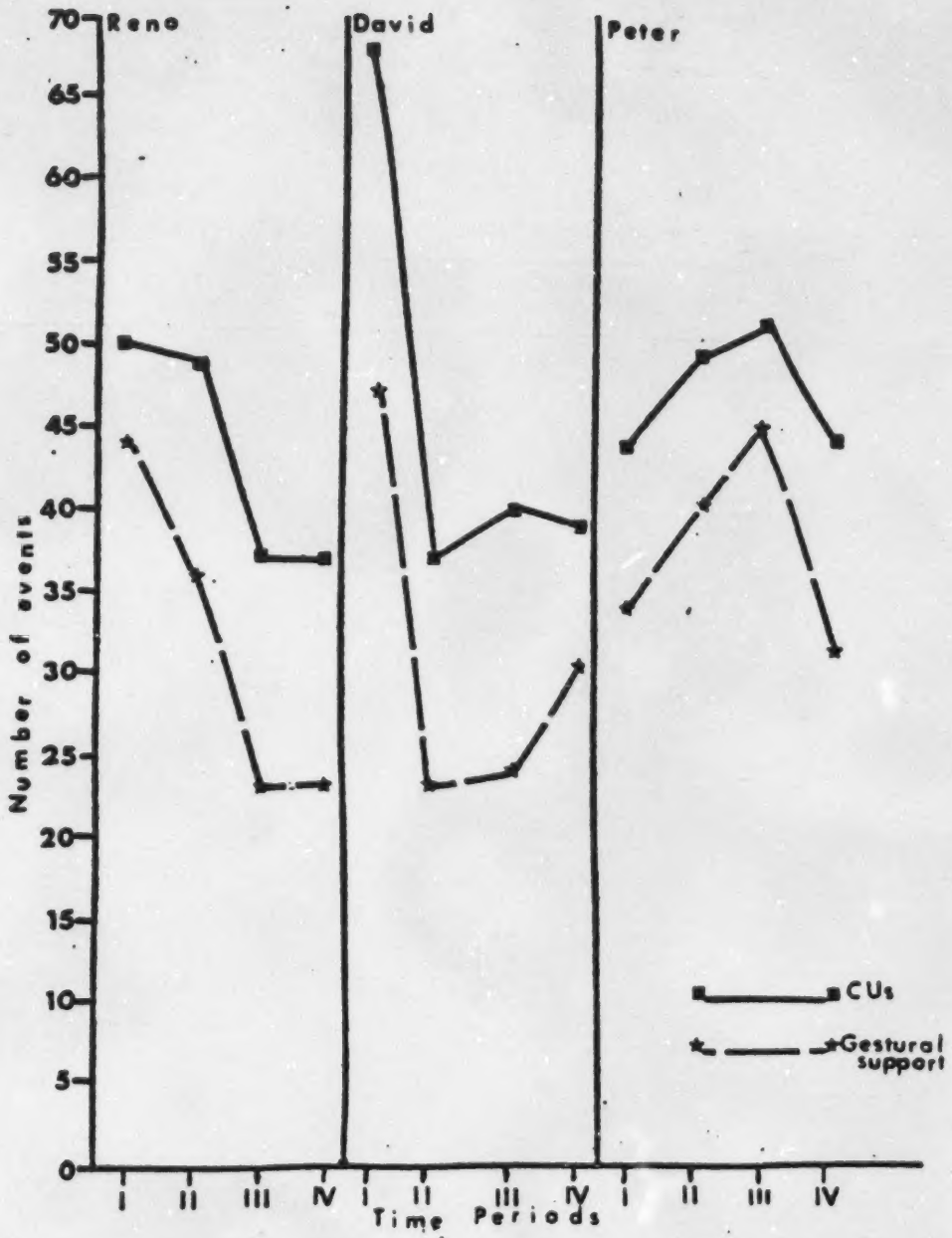

Fig 2 Frequency of CUs and gestural support for CUs.

Table 1 details the CU data for each time period. The distribution was significantly different over time only for David, indicating an overall decrease in the number of CUs (although the sharp decline at Time II was followed by an increase at Time III). No significant differences were found when comparing dyads to each other or when comparing members of each dyad either in total conversational time or in the MLCU. However, as can be seen in Table 1, the MLCU for both Reno and David increased by nine seconds from Time I - Time IV, while Peter's MLCU decreased by two seconds. Table 1 also indicates an important increase in the ability to sustain conversation from Time I - Time IV for both Reno and David. There is a 9 second decrease in the maximal CU time for Peter comparing Times I and IV.

The initiator of conversation was tallied for all CUs. Results showed that only David had a significant decrease in the number of CUs which he initiated across time. Inspection of Table 2 indicates that Reno initiated conversation 15% of the sample at Time IV in comparison with 10% at Time I. Peter's increase from 19% to 25% can be observed. The 10% decrease for David is believed to represent a response to his mother's greater verbal frequency and the presumed suppression of David's conversation.

In viewing the length of total time spent in conversation, an increase in conversational ability for both Reno and David is observable. Of particular interest is the observation that at Time III both of these dyads were able to maintain conversation for 49% or 50% of the event sampled. The decrease at Time IV from Time III is not interpreted as an artifact. Although Peter and his mother's total conversation time decreased from Times I to IV, Peter's ability to sustain conversation was evident at Time III when the CUs represented

TABLE 1

CU Time Analysis and Gesture

Child	Time Period	Number of CUs	Time Range for CUs in Min. & Sec.	CU Total Time in Min. and Sec.	MLCU	% Gestural Support
Reno	I	50	1"-44"	6'54"	13"	12
	II	45	2"-54"	7'54"	17"	20
	III	36	6"-1'45"	9'20"	24"	36
	IV	35	5"-1'3"	7'19"	22"	34
David	I	68	1"-32"	7'26"	11"	35
	II	37	3"-9"	8'19"	21"	35
	III	45	1"-2'	9'33"	20"	44
	IV	41	2"-1'3"	8'19"	20"	22
Peter	I	44	2"-1'13"	7'6"	17"	20
	II	47	2"-36"	6'36"	14"	19
	III	54	2"-1'16"	8'9"	15"	19
	IV	44	1"-1'4"	7'15"	15"	25

TABLE 2

Initiator and Topic Time of CU

Dyad	Period	No. CUs Initiated	% Total Time in CUs	MLCU	Time		
					Pres.	Past	Fut.
Reno	I	15	10	12"	15	-	-
R. Mother		35	26	13"	35	-	-
Reno	II	10	7	12"	10	-	-
R. Mother		35	35	18"	29	5	1
Reno	III	22	25	20"	19	3	-
R. Mother		14	24	31"	16	4	2
Reno	IV	14	15	18"	11	3	-
R. Mother		21	29	25"	15	6	-
David	I	33	16	9"	33	-	-
D. Mother		35	23	9"	24	3	8
David	II	16	15	17"	15	1	-
D. Mother		21	28	24"	11	9	1
David	III	18	11	11"	16	1	-
D. Mother		27	39	26"	21	3	4
David	IV	13	6	8"	9	4	-
D. Mother		28	40	26"	24	3	1
Peter	I	24	19	14"	24	-	-
P. Mother		20	23	21"	15	2	3
Peter	II	27	19	13"	26	-	1
P. Mother		20	16.5	15"	20	-	-
Peter	III	39	36	16"	33	5	1
P. Mother		15	9	11"	10	3	2
Peter	IV	27	25	16"	25	2	-
P. Mother		17	13	14"	16	1	-

45% of the sample. Additional CU data is presented in Table 2. By observing the ability of the dyads to sustain conversation about more than the here and now, decisive change was observed over time. At Time I, all the CUs initiated by the children were concerned with the present. Other than Reno's mother, the mothers talked about past, present, and future events at the first period. By Time IV, all the children were initiating conversation about the past and present. Data at Times II and III, reveal two of the children's initial attempts to initiate conversation about the future. In addition, as can be observed in Table 2, the MLCU was seemingly not affected by this increased ability.

Discussion

By studying the episodes comprising the CUs, in terms of topic, initiator, and time, inferences can be drawn about the development of conversational skills. Although no significant distributional differences were found in any of the parameters of the CU studied, further interpretation indicated that the absolute figures were misleading. Verbal functional complexity, as evaluated through the CU, increased substantially for both Reno and David. Peter's linguistic skills were more sophisticated at Time I than those of the other children, and relatively less change was observed in his conversational behavior over time. Both Reno's and David's data revealed the number of CUs decreased by Time IV, as hypothesized. Although the MLCU for both dyads increased by only nine seconds from Time I to IV, greater skill in conversational exhange accounted for the increase of the interval range of the CU time. These two children were more involved conversationally, both in initiating and sustaining conversation. The increase in the percentage of conversation indicated that language had acquired greater functional use for communicative purposes.

The ability to communicate beyond the here and now considerably changed over time for all the children. Conversation between Reno and his mother at Time I dealt with the precent. However at Time II, although Reno did not initiate any CU except the present, his mother initiated five in the past and one in the future.

	Verbalization	Gesture
II. M:	Reno, who did you see yesterday?	R. looks at M.
R:	Cammera	
M:	and who else?	
R:	Denise	
M:	And who else?	R: looks at M.
	And who hurt you?	
	Who hurt your nose?	M: touches nose
	Did Aunt Arlene come over	R: watches M.
R:	over	
M:	And their dog?	
	Do you remember the dog's name.	
	What's the dog's name?	
R:	(s) igger.	

By Time IV, 27% of Reno-initiated CUs focused on past events.

	Verbalization	Gesture
IV. R:	See ma mouf? (my mouth)	
M:	What happened?	
R:	I hurts my mouf.	R: points to mouth
M:	Where?	M: looks closely at R.'s mouth
R:	At Andrews	
	I hurt it on - -	
	A bi-cycle	M: nods head
M:	Oh - you crashed. O.K.	M: smiles
R:	I crash tagain (crashed again)	

David at Time I, indicated greater ability to understand past and future than Reno, although he too initiated CUs only in the present. By Time IV, 45% of CUs initiated by David, were about past events.

	Verbalization	Gesture
IV. D:	Daddy cean (clean) car.	
M:	Daddy cleaned the car -- when?	
	He cleaned the car yesterday.	
	And you went to look at it, Right?	
	Did David help Daddy clean the car?	M: looks at D.
D:	No	
M:	What'd you do?	
D:	Help Daddy	
	Daddy wipe	
	David wipe	D: looks at M.
	Daddy ean it (clean)	
M:	Yes - David helped Daddy to wipe the car.	
D:	Wipe the car	

A similar pattern was observed for Peter. At Time I, although all CUs which he initiated were about present events, he appropriately responded to both past and future. Peter consistently demonstrated ability to deal with the past at Time III. The following CU demonstrates his long term memory and ability to understand protracted linguistic exchange.

	Verbalization	Gesture
III. M:	Wanna tell E. what you -- about the snack you had today?	P: points to mike
	We went -- had a soda and what did we have for a snack, hm?	
	What did you eat with your soda?	
P:	fench fies (French fries)	
M:	right -- and who did we see after -- after we went for the soda? who did we play with in the street?	P: points finger at M. and shakes it
P:	neba-neba (never-never)	
M:	never-never	M: points finger at P. and shakes it
	That's right	
	You never never go in the street. You were naughty today, weren't you?	

Maternal speech styles, although individualistic, confirmed previous findings of strategies of closure games, songs, story telling and question chaining. Dyadic communication became more effective as the children acquired rules for conversational exchange. Prominent at Time IV was the diversity of form and function expressed by the children. A broader range of topics either sustained or initiated was apparent. Emphasis appeared on expression of action constructs. The reciprocal relationship of communicative exchange was interpreted as being dependent on both cognitive and linguistic aspects. Further research is needed to identify the beginning of the CU, as all subjects studied had acquired rudimentary conversational ability at the start of study. Significant findings that children are simultaneously mastering a linguistic system and communicative competence has direct bearing on the assessment and treatment of language disordered children.

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